

Listing of Claims

The following listing of claims replaces all prior versions and listings of claims in the Application.

1-18. (Cancel)

19. (Currently Amended) A prosthetic disc comprising:

a disc body, having a first surface that is a concave-convex articulating surface and a second surface as a base adapted for fixation to a first bone surface, wherein the concave-convex articulating surface has a substantially hyperbolic paraboloid shape.

20. (Canceled)

21. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the first surface is a saddle surface.

22. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the first surface is a surface with negative curvature.

23. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the second surface is substantially planar.

24. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the second surface is a separate component manufactured separately.

25. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the second surface has ~~additional~~ features for bone ingrowth.

26. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the second surface is made of a porous material.

27. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the second surface is provided with a surface treatment.

28. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the first surface is shaped to be mated to a lower surface of a vertebra positioned above the first surface.

29. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the first surface is shaped to be mated to and articulate with a second artificial body positioned above the first surface.

30. (Currently Amended) The prosthetic disc of claim 19 ~~claim 1~~, wherein the first surface is adapted for articulation with a vertebral body.

31. (Currently Amended) An artificial intervertebral disc comprising:
a disc body having a superior articulating ~~concave-convex~~ surface and an inferior surface adapted for fixation to bone, wherein the superior articulating surface has a substantially hyperbolic paraboloid shape, wherein a convex reference curve is formed when the superior articulating surface is intersected with a midsagittal plane, wherein a concave reference curve is formed when the superior articulating surface is intersected with a second plane orthogonal to the midsagittal plane.

32. (Previously Presented) The artificial intervertebral disc of claim 31, wherein the superior articulating ~~concave-convex~~ surface is adapted for articulation with a second body.

33. (Withdrawn) The artificial intervertebral disc of claim 32, wherein second body is a vertebral body.

34. (Currently Amended) The artificial intervertebral disc of claim 32, wherein the second body is an artificial disc body having an inferior articulating ~~concave-convex~~ surface and a superior surface adapted for fixation to bone, wherein the inferior articulating surface has a substantially hyperbolic paraboloid shape.

35. (Previously Presented) The artificial intervertebral disc of claim 32, wherein the articulating surface is a saddle surface.

36. (Currently Amended) The artificial disc of claim 34, wherein the inferior articulating ~~concave-convex~~ surface of the second body is reciprocally ~~concave-convex~~ shaped with respect to the superior articulating ~~concave-convex~~ surface of the disc body.

37. (Withdrawn; Currently Amended) A method of providing a prosthetic disc comprising the steps of:

removing a portion of an intervertebral disc, thereby creating an intervertebral disc space; and

placing a prosthetic disc substantially within said intervertebral disc space, wherein the prosthetic disc consists essentially of ~~comprises~~:

a disc body, having a first surface that is a concave-convex articulating surface and a second surface as a base adapted for fixation to a first bone surface, wherein the concave-convex surface has a hyperbolic paraboloid shape.

38. (Withdrawn; Previously Presented) The method of claim 37, wherein placing includes mating the disc body to a surface of a vertebra.

39. (Withdrawn; Previously Presented) The method of claim 37, wherein the prosthetic disc is shaped to be mated to a second body upon placing within the intervertebral disc space.

40. (Withdrawn; Previously Presented) The method of claim 37, wherein the prosthetic disc is adapted for articulation with a vertebral body.

41. ((Withdrawn; Previously Presented) The method of claim 37, wherein placing includes mating the prosthetic disc to a surface of a second artificial body.

42. (Currently Amended) An artificial disc suitable for placement between adjacent vertebra comprising:

a disc body having a superior articulating ~~concave-convex~~ surface and an inferior surface adapted for fixation to bone, wherein the superior articulating surface has a hyperbolic paraboloid shape, wherein a convex reference curve is formed when the articulating surface is intersected with a midsagittal plane, wherein a concave reference curve is formed when the articulating surface is intersected with a second plane orthogonal to the midsagittal plane.